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PLANT INDUSTRY

PLANT IMMIGRANTS.

No. 183. JULY, 1921.

GENERA REPRESENTED IN THIS NUMBER.

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Foreign Seed and Plant Introduction.

EXPLANATORY NOTE.

This circular is made up largely from notes received from our agricultural explorers, foreign correspondents, cooperators and others relative to the more important plants which have been received recently by the Office of Foreign Seed and Plant Introduction of the Department of Agriculture. In it are also contained accounts of the behavior in America of plants previously introduced.

Descriptions which appear here are revised and published later in the Inventory of Seeds and Plants Imported.

Applications from Experimenters for plants or seeds described in these pages may be made to this Office at any time. As they are received requests are placed on file, and when the seeds or plants requested are ready for Experimenters, they are sent to those who seem best situated and best prepared to care for them.

However, not all the plants described herein are available. Some of them on arrival are sent direct to Experimenters or to specialists of the Department or of the State Experiment Stations. The remaining plants, with which extensive tests in this country are desired, are propagated at the Plant Introduction Gardens, and when they are ready for Experimenters they are listed in the Check Lists accompanying the ANNUAL CATALOGUE OF NEWLY INTRODUCED PLANTS, which is sent to cooperators each autumn. It is not necessary, however, to await the receipt of the catalogue should an Experimenter wish to apply for any of the plants here described.

One of the objects of the Office of Foreign Seed and Plant Introduction is to secure experimental quanities of new or rare foreign seeds or plants for plant breeders and experimenters, and every effort will be made to fill specific requests.

DAVID FAIRCHILD,
Agricultural Explorer in Charge,
Office of Foreign Seed and Plant Introduction.

Issued August 20, 1921. Washington, D.C.

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Abies faxoniana (Pinaceae), 52622. **Fir**. From Elstree, Herts, England. Plants presented by Hon. Vicary Gibbs. A tree 70 to 130 feet high with dull gray, fissured bark and horizontal branches; it is the common species in northwest Szechwan where it forms extensive forests. The tree is characterized by the short, broadly ovoid scales of its very resinous winter buds, by its reddish hairy shoots, rather short flat leaves, and its violet-purple, oblong, densely resinous cones, 3 to 4 inches long. (Adapted from Sargent, Plantae Wilsonianae, vol. 2, p. 42.)

Abies recurvata (Pinaceae), 52624. **Fir**. From Elstree, Herts, England. Plants presented by Hon. Vicary Gibbs. A very remarkable species, unlike any other in its strongly decurved but assurgent leaves. It is a very local species forming entire forests in the Min Valley south of Sung-pan. The tree reaches a height of 80 feet and has reddish brown bark. The leaves are deep green or very glaucous, varying very much in this respect. The small, erect, brown cones are borne in clusters at the ends of the branches and near the top of the trees. The timber is hard, resinous, and highly valued for building purposes. (Adapted from Journal of the Linnean Society, vol. 37, p. 423.)

Aextoxicon punctatum (Euphorbiaceae), 52586. From Santiago, Chile. Seeds presented by Mr. F. Albert, consulting forester, Forestry Department, through U. S. Forest Service. "Tique." A Chilean tree belonging to the spurge family, with small colorless scales covering all of its parts, and with dense foliage. The leaves, quite stiff and narrowly oblong in shape, are very dark green on the upper surface and light green or even whitish below. The small white flowers are borne in short axillary racemes, and the fruits are small, black, olive-shaped drupes. By reason of its beauty the wood is admirably suited for the making of furniture, etc. (Adapted from Castillo and Dey, Jeografia Vejetaldel Rio Valdivia, p. 68.)

Alphitonia excelsa (Rhamnaceae), 52896. From Kulara, Queensland. Seeds presented by Mr. J. A. Hamilton. A tree 50 feet high, one of the characteristic trees of the Brigalow scrub of New South Wales, Queensland, and northern Australia. The wood is hard, close-grained, and durable; takes a high polish; and is suitable for gunstocks, coopers' staves, and for indoor purposes;

near the outside it is pinkish and the inner wood is dark brown. The bark is occasionally used for tanning. (Adapted from Maiden, Useful Native Plants of Australia, p. 373.)

Axonopus sp. (Poaceae), 52917. **Grass.** From Bello Horizonte, Minas Geraes, Brazil. Seeds presented by Prof. P. H. Rolfs, through Prof. C. V. Piper, U. S. Department of Agriculture. "Collected at Vicosa. A grass that has some very good points for grazing purposes,- very leafy, covering the ground more densely than St. Augustine at its best. Where the leaves are not cropped off by grazing it stands about 8 inches tall. Zebu have grazed it considerably. It is very persistent in its own patches and crowds out practically everything else. The patches that I saw produced very little seed; possibly more will be produced when we get into the beginning of the dry season." (Rolfs.)

Carica papaya (Papayaceae), 52620. **Papaya.** From Honolulu, Hawaii. Seeds presented by Mr. J. M. Westgate, agronomist in charge, Agricultural Experiment Station. "'Solo.' This variety of papaya, which has been under cultivation through four generations, has transmitted its characteristic flavor and texture, and to a reasonable degree its shape, to all of the seedlings of its kind that have come under observation. The fruits are quite small, in many instances being only large enough for one serving. Most plants of the variety are hermaphrodite or bisexual, but staminate trees are found occasionally. Although the fruits are small, they are crowded into the axil of nearly all the leaves and are so numerous that the yield is reasonably heavy, yet not equalling in weight that of some of the large kinds. The fruit is pyriform, somewhat irregular, colors well and uniformly before softening, and is free from the diseased spots which occur on the surface and penetrate the pulp of many of the large forms. The flesh is of medium thickness, of bright yellow color, smooth, tender almost to melting, and of delicious flavor even near the stem end where many papayas lack flavor. The seeds, which are abundant, provide a ready and rapid means of propagation, and, because of the loose placenta, or inner lining of the fruit to which the seeds are attached, they are very easily removed when the fruit is prepared for serving. From the standpoint of the home gardener, the 'Solo' is considered one of the

A NEW DAHLIA FOR PLANT BREEDERS.

(*Dahlia maxonii* Safford, S. P. I. No. 49328.)

The three flowers here shown are from a single plant of a lilac-pink form of *Dahlia maxonii* that Mr. Wilson Popenoe found near Coban in the Alta Vera Paz, Guatemala. The double flower on the right and the semidouble one in the center of the picture arose as bud sports from the typical single-flowered plant. (Photographed by Mr. Popenoe, Tactic, Guatemala, January 9, 1920; P17707FS.)

FLOWER CLUSTER OF A NEW MIDSUMMER-FLOWERING CHINESE SHRUB.

(*Sorbaria arborea* Schneid., S. P. I. No. 40597.)

This handsome upright shrub was discovered by Mr. E. H. Wilson in central China. The bright-green foliage appears very early in the spring, and the large showy panicles of white flowers are produced on the young terminal growths, which extend the blooming period well over July and August. (Photographed by P. H. Dorsett, Yarrow Plant Introduction Field Station, Rockville, Md., July 19, 1918; P24196FS.)

best of the papayas that have been grown at the experiment station, for, although small, its qualities of texture and flavor give it first rank." (Report of the Hawaii Agricultural Experiment Station, 1919, p. 28.)

Cassia nodosa (Caesalpiniaceae), 52797. From Honolulu, Hawaii. Seeds presented by Mr. Harold L. Lyon, in charge, Department of Botany and Forestry. A moderate-sized tree, native to eastern Bengal and Malaya, very beautiful when bearing its profusion of bright pink, rose-scented flowers during May and June. The cylindric pods are 12 to 15 inches long. The tree is deciduous in dry weather. (Adapted from Macmillan, Handbook of Tropical Gardening and Planting, p. 294.)

Citrus grandis (Rutaceae), 53611. From Guayaquil, Ecuador. Seeds presented by Mr. Frederick W. Goding, American consul general. "A native Ecuadorian fruit, known locally as 'toranja,' which has the appearance of a mammoth orange nearly as large as a medium-sized human head. The arrangement of the interior of the fruit resembles that of the orange, but the color is salmon, and the taste an acid bitter, similar to but more pronounced than that of the ordinary grapefruit, for which it is being used as a substitute in Ecuador.

"Were this fruit properly cultivated, so as to lessen the coarseness of its pulp, it would be prized as a food; it would present an attractive appearance on the table." (Goding.)

Dioscorea pentaphylla (Dioscoreaceae), 52876. **Yam.** From Aulnay-Sous, France. Tubers presented by Prof. R. deNoter, director, Ecole d'Acclimatation et de Vulgarisation. Variety "Wortorum."

"'Igname ronde de Chine' (round yam of China). The tubers made the first season, from plants grown from 'eyes' dug and replanted, weigh 1 1/2 kg. (3 lbs.) each; the second year the tuber may weigh 4 to 5 kg. (8 to 11 lbs.). The plant requires light sandy clay or, better, calcareous, richly fertilized soil. The tubers are gathered at the first frost and stored in the cellar. Two years' storage does not injure but improves the tubers. The round yam of China is an excellent vegetable of delicate flavor and makes delicious fritters, cakes, and soufflés. The leaves, after the harvest, are used as cattle feed." (deNoter.)

Dioscorea sp. (Dioscoreaceae), 53006. **Yam**. From Mayaguez, Porto Rico. Tubers presented by Mr. T. B. McClelland, horticulturist, Agricultural Experiment Station. "'Guinea yam.' A white-fleshed yam of excellent quality, and one of the most popular varieties grown in Porto Rico. The tubers are usually cylindrical, and commonly weigh from 3 to 6 pounds each at maturity. This yam is distinctive in vegetative characters in that the vine bears short recurved spines and that the form of the leaves on the older portions is modified." (R. A. Young.)

Diospyros conzatti (Diospyraceae), 53176. **Persimmon**. From Cerro Espino, Oaxaca, Mexico. Seeds presented by Mr. P. C. Standley, U. S. National Museum. "'Zapote negro montés,' collected at Cerro Espino, April, 1921, by Prof. C. Conzatti. The fruit is said to be better than that of *Diospyros ebenaster*." (Standley.)

A tree of particular interest on account of the exquisite flavor of its edible fruit, 2 inches in diameter and 1 inch long. In quality it is comparable with the 'chico-zapote' (*Achras zapota*). It is green skinned, and much smaller than the common black sapote (*D. ebenaster*). Propagation of this magnificent tree is relatively simple on account of its vigor and the altitude at which it thrives, 4,000 feet above sea level. (Adapted from Boletin de la Direccion de Estudios Biologicos, vol. 2, no. 3, p. 316.)

Eucryphia cordifolia (Eucryphiaceae), 52589. From Santiago, Chile. Seeds presented by Mr. F. Albert, consulting forester, Forestry Department, through U. S. Forest Service. "Muermo." An ornamental, and also useful, Chilean tree which attains a height of about 15 feet, with thick, leathery, shining leaves and aromatic, white flowers which appear in the spring and make the tree a beautiful sight. Because of the abundance of nectar, this tree is a favorite with bees. The bark, rich in tannin, is utilized in dyeing and also in medicine. (Adapted from Castillo and Dey, Jeografia Vejetal del Rio Valdivia, p. 81.)

Euonymus hamiltonianus (Celastraceae), 53699. From Kew, England. Seeds presented by Sir David Prain, director, Royal Botanic Garden. A large shrub,- under favorable circumstances a moderate-sized tree, 30 to 35 feet high, with a short straight trunk 4 to 5 feet in girth. The clusters of 15 to 30 greenish white

flowers are followed by yellow capsules the seeds of which are are entirely surrounded by a scarlet aril. The fruit ripens from August onward, and the leaves are brilliantly colored in fall. The wood is beautifully white, compact and close, not very hard, and is used for making spoons. The young shoots and leaves are lopped for fodder. Common in the outer Himalayan ranges from the Indus to Bhutan, between 3,800 and 8,500 feet altitude, also in the Khasia Hills, generally in mixed forest where there is some shade. Hardy in England. (Adapted from Brandis, Forest Flora of India, p. 78; and Arnold Aboretum, Bulletin of Popular Information, No. 13.)

Gossypium barbadense (Malvaceae), 53493. **Cotton.** From Alexandria, Egypt. Seeds presented by Mr. A. N. Anagnosti, through Mr. Henry G. Brooks, New York City. "'Suprema cotton.' One of the men now connected with us developed some years ago in Egypt a variety of cotton but did not bring it out at that time owing to the fact that 'Sakellaridis' was then a popular variety. We understand that the seed of this cotton has been held for some ten to fourteen years in sacks in Alexandria, Egypt. From examination of some of the lint which has been sent us it appears that this cotton is not as long as the 'Sakellaridis' cotton but it has a very fine fiber and very good luster.

"As the 'Sakellaridis' cotton has been deteriorating of late in Egypt, and as the 'Pima' cotton grown in Arizona is too long and lacks luster for many purposes, and as the 'Sea Island' cotton, so-called, has been practically given up, it appears that this 'Suprema' cotton would supply length, fineness, and luster, that are not now supplied by the American crop." (Henry G. Brooks.)

Khaya nyasica (Meliaceae), 53474. From Mount Salinda, Southern Rhodesia. Seeds presented by Dr. W. L. Thompson. "One of our largest and most valuable (for timber) forest trees." (Thompson.)

A huge tree attaining a height of 150 feet or more, and sometimes a diameter of 15 feet; one that I measured in the Inyamkuwha forest patch having attained this diameter at 8 feet from the ground just above the buttresses. Diameters of 5 to 8 feet are not uncommon. The trunk is almost always very straight, and runs up to a considerable

height before branching; the young saplings have much the appearance of young *Castilla elastica* (rubber). The bark is light gray, thick, smooth or laminated, astringent in taste , and reminds one of quinine, - hence the native name "Umbaba" (to be bitter). The hard red timber has a handsome grain, is fairly easily worked, and weathers well above ground. It is untouched by Bostrychidae or termites. The tree makes an enormous crown of handsome glossy foliage. The old trees are in full bloom the first of November, and the fruits begin to ripen at the end of the following September, continuing to fall till December and littering the ground for some distance in every direction. (E. G. Baker, Journal of the Linnean Society, vol. 40, p. 42.)

Notes from Correspondents.

Mr. H. J. Elwes, Colesborne, Cheltenham, England, has kindly acceded to our request that we be allowed to quote the following excepts from his letter of April 4, 1921:

"Your papers on 'Plant Immigrants' are certainly very valuable to horticulturists in all countries, and I thank you again for sending them, considering that at my age I can do little to reciprocate and make return for them.

"In Plant Immigrants No. 177, (Jan. 1921, pl. 278) I notice that the Chinese ginger (*Zinziber officinale*) has been successfully grown in Maryland. Have you tried the Japanese species *Z. mioga*?* If not, I can send you either strong plants in pots or dried roots.....

"I am much interested in Mr. Rock's notes from Siam. The mountains in the interior of that country are undoubtedly one of the finest unexplored regions for the botanist and horticulturist and I am assured by a neighbor who is the most intimate personal friend of the King of Siam (who lived in his house for a year to learn English) that every facility would be given to a suitable man who wished to explore there. I only wish that Forrest had gone

.....

*The Japanese ginger which we have grown, under S.P.I. No. 44579, does not compare with the Chinese ginger in quality.

there instead of to China again (for the 4th time) but they are all mad here on Rhododendrons, of which they have already twice as many species (or so-called species) as they can identify or grow in any one garden, but they won't grow on my limy soil, so I shall not end my days in a lunatic asylum on account of them.

"You certainly have got some very live and enterprising men in your Department, and I only wish I could come over again and see more of the results of their work."

The following is quoted from Wilson Popenoe's 1921 Report to the California Avocado Association:

"The incident of outstanding interest during the course of the explorations in Costa Rica was the discovery, by Oton Jiminéz and myself, of a wild avocado on the slopes of the Volcano Irazu. We found it in fruit, but not in flower: hence we have not yet been able to complete the botanical study of the species. But basing my opinion upon the character of the tree and its fruit, I am inclined to believe that we have at last fallen upon the true wild avocado, the prototype of the cultivated Guatemalan race and probably also of the West Indian.

"The fruits of this wild avocado are the size of small oranges, quite round, and dark green in color, the general appearance being similar to that of many Guatemalan varieties. The shell is thick and hard, and the flesh, which is very scanty and of gritty texture, has a strong flavor of anise. We sent seeds of this species (*Persea* sp., S.P.I. No. 50585.) to Washington, and I am informed that about two dozen plants are now growing in the greenhouse there. While this fruit is of little value for eating, the plant will be tested as a stock for better varieties. It is well known that the wild forms of fruits which have under intensive cultivation reached a high state of perfection often make admirable stock-plants, having more vigor than the cultivated varieties."

OFFICE OF FOREIGN SEED AND PLANT INTRODUCTION
BUREAU OF PLANT INDUSTRY
UNITED STATES DEPARTMENT OF AGRICULTURE

Washington Scientific Staff.

David Fairchild, Agricultural Explorer in Charge.
P. H. Dorsett, Plant Introducer, in Charge of Introduction Gardens.
Peter Bisset, Plant Introducer, in Charge of Experimenters' Service.
Wilson Popenoe and J. F. Rock, Agricultural Explorers.
B. T. Galloway, Pathologist, Special Research Projects.
H. E. Allanson, Plant Introducer, in Charge of Foreign Plant Stock Investigations.
R. A. Young, Plant Introducer, in Charge of Dasheen and Tropical Yam Investigations.
H. C. Skeels, Botanist, in Charge of Collections.
G. P. VanEseltine, Assistant Botanist, in Charge of Publications.
L. G. Hoover, Assistant Plant Introducer, in Charge of Chayote Investigations.
C. C. Thomas, Assistant Plant Introducer, in Charge of Jujube Investigations.
E. L. Crandall, Assistant in Charge of Photographic Laboratory.
P. G. Russell and Patty Newbold, Scientific Assistants.

Introduction Garden Scientific Staff.

D. A. Bisset, Superintendent in Charge of the Plant Introduction Garden, Bell, Md. (P.O., Glenn Dale, Md.); Edward Goucher, Plant Propagator.
J. E. Morrow, Superintendent in Charge of the Plant Introduction Garden, Chico, Calif.; Henry Klopfer, Plant Propagator.
Edward Simmonds, Superintendent in Charge of the Plant Introduction Garden, Miami, Fla.; Charles H. Steffani, Plant Propagator.
W. A. Patten, Superintendent in Charge of the Plant Introduction Garden, Brooksville, Fla.
Henry Juenemann, Superintendent in Charge of the Plant Introduction Garden, Bellingham, Wash.
E. J. Rankin, Assistant in Charge of the Plant Introduction Garden, Savannah, Ga.

Special Collaborators.

Thomas W. Brown, Cairo, Egypt; Robert H. Forbes, Cairo, Egypt; A. C. Hartless, Seharunpur, India; E. W. D. Holway, Faribault, Minn.; Barbour Lathrop, Chicago, Ill.; Dr. H. L. Lyon, Honolulu, Hawaii; Henry Nehrling, Gotha, Fla.; Charles T. Simpson, Littleriver, Fla.; Dr. L. Trabut, Algiers, Algeria; Dr. William Trelease, Urbana, Ill.; E. H. Wilson, Jamaica Plain, Mass.